

ABSTRACT

Antisense oligomers directed to bacterial cell division and cell cycle-encoding nucleic acids are capable of selectively modulating the biological activity thereof, and are useful in treatment and prevention of bacterial infection. The antisense oligomers are substantially uncharged, and contain from 8 to 40 nucleotide subunits, including a targeting nucleic acid sequence at least 10 nucleotides in length which is effective to hybridize to (i) a bacterial tRNA or (ii) a target sequence, containing a translational start codon, within a bacterial nucleic acid which encodes a protein associated with cell division or the cell cycle. Such proteins include *zipA*, *sulA*, *secA*, *dicA*, *dicB*, *dicC*, *dicF*, *ftsA*, *ftsI*, *ftsN*, *ftsK*, *ftsL*, *ftsQ*, *ftsW*, *ftsZ*, *murC*, *murD*, *murE*, *murF*, *murG*, *minC*, *minD*, *minE*, *mraY*, *mraW*, *mraZ*, *seqA*, *ddlB*, carbamate kinase, D-ala D-ala ligase, topoisomerase, alkyl hydroperoxide reductase, thioredoxin reductase, dihydrofolate reductase, and cell wall enzyme.